Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

Claim 1. (Currently amended) A method for modifying the glycosylation pattern of a glycopeptide comprising an acceptor moiety for a first fucosyltransferase selected from FucT-IV, FucT-V, FucT-VI, FucT-VII, and combinations thereof, wherein said first fucosyltransferase lacks a membrane anchoring domain, said method comprising:

(a) contacting the glycopeptide with a reaction mixture that comprises a fucose donor moiety and the first fucosyltransferase under appropriate conditions to transfer fucose from the fucose donor moiety to the acceptor moiety, such that the glycopeptide has a substantially uniform fucosylation pattern.

Claim 2. (Currently amended) The method according to claim **1**, wherein the glycopeptide comprises a second acceptor moiety for a second fucosyltransferase, and the method further comprises

(b) contacting the glycopeptide with a reaction mixture that comprises a fucose donor moiety and the second fucosyltransferase under appropriate conditions to transfer fucose from the fucose donor moiety to the acceptor moiety, such that the glycopeptide has a substantially uniform fucosylation pattern.

Claim 3. (Original) The method according to claim **2**, wherein the glycopeptide is contacted with the first fucosyltranferase and the second fucosyltransferase simultaneously.

Claims 4. (Original) The method according to claim **2**, wherein the glycopeptide is contacted with the first fucosyltransferase and the second fucosyltransferase sequentially without isolation of product resulting from contacting with the first fucosyltransferase.

Claim 5. (Cancelled)

Claim 6. (Currently amended) The method according to claim **2**, wherein the second fucosyltransferase is a member selected from FucT-IV, FucT-V, FucT-VI, FucT-VII and combinations thereof.

Claim 7. (Original) The method of claim **1**, wherein the fucosyltransferase is bacterial.

Claim 8. (Original) The method of claim **1**, wherein the fucosyltransferase is recombinantly produced.

Claim 9. (Cancelled)

Claim 10. (Original) The method of claim **1**, wherein at least about 80% of the acceptor moieties on the glycopeptide are fucosylated.

Claim 11. (Original) The method of claim **1**, wherein glycopeptide is reversibly immobilized on a solid support.

Claim 12. (Currently amended) The method of claim **11 [1]**, wherein the solid support is an affinity chromatography medium.

Claim 13. (Original) The method of claim **1**, wherein the glycopeptide is a full-length glycopeptide.

Claim 14. (Original) The method of claim **1**, wherein the glycopeptide is a fragment of a full length glycopeptide comprising an active site of the full-length glycopeptide.

Claim 15. (Original) The method according claim **1**, wherein the glycopeptide is an IgG chimera.

Claim 16. (Original) The method of claim **1**, wherein the glycopeptide is a hormone, a growth factor, an enzyme, an enzyme inhibitor, a cytokine, a receptor, a ligand, or a 7monoclonal antibody.

Claim 17. (Original) The method of claim **1**, wherein the glycopeptide is on a cell.

Claim 18. (Original) The method of claim **1**, wherein the acceptor moiety comprises Galβ1-OR, Galβ1,3/4GlcNAc-OR, NeuAcα2,3Galβ1,3/4GlcNAc-OR, wherein R is an amino acid, a saccharide, an oligosaccharide or an aglycon group having at least one carbon atom and is linked to or is part of a glycopeptide.

Claim 19. (Original) The method of claim **1**, wherein the fucose donor moiety is GDP-fucose.

Claim 20. (Original) The method of claim **1**, further comprising, prior to step (a), contacting said glycopeptide with a glycosyltransferase other than a fucosyltransferase and a donor moiety other than a fucose donor moiety, thereby glycosylating the glycopeptide with a glycosyl moiety other than a fucose unit.

Claim 21. (Original) The method of claim **20**, wherein the glycosyltransferase is a member selected from the group consisting of galactosyltransferase, sialyltransferase and combinations thereof.

Claim 22. (Withdrawn) A composition comprising a glycopeptide fucosylated according to the method of claim **1**.

Claim 23. (Withdrawn) The composition of claim **22**, wherein at least 80% of the acceptor moieties on the glycopeptide are fucosylated.

Claim 24. (Withdrawn) The composition of claim **22**, wherein glycopeptide is attached to a solid support.

Claim 25. (Withdrawn) The composition of claim **24**, wherein the solid support is an affinity chromatography medium.

Claim 26. (Withdrawn) The composition of claim **22**, wherein the glycopeptide is a full-length glycopeptide.

Claim 27. (Withdrawn) The composition of claim **22**, wherein the glycopeptide comprises Fucα1,2Galβ1-OR, Galβ1,3/4(Fucα1,4/3)GlcNAc-OR, NeuAcα2,3Galβ1,3/4(Fucα1,3/4)GlcNAc-OR, Fucα1,2Galβ1,3/4(Fucα1,4/3)GlcNAcβ-OR wherein R is an amino acid, a saccharide, an oligosaccharide or an aglycon group having at least one carbon atom and is linked to or is part of a glycopeptide.

Claim 28. (Withdrawn) The composition of claim **22**, wherein the glycopeptide comprises NeuAcα2,3Galβ1,3/4(Fucα1,3/4)GlcNAc-OR, wherein R is an amino acid, a saccharide, an oligosaccharide or an aglycon group having at least one carbon atom and is linked to or is part of a glycopeptide.

Claim 29. (Withdrawn) The composition of claim **22**, wherein the glycopeptide is a hormone, a growth factor, an enzyme, an enzyme inhibitor, a cytokine, a receptor, a ligand, or a monoclonal antibody.

Claim 30. (Withdrawn) The composition of claim **22**, wherein the glycopeptide is on a cell.

Claim 31. (Currently amended) A method of producing a recombinant glycopeptide having a fucosylation pattern that is substantially identical to a fucosylated glycopeptide having a known fucosylation pattern, said method comprising:

(a) contacting the recombinant glycopeptide with a reaction mixture that comprises a fucose donor moiety and the fucosyltransferase <u>is selected from FucT-IV, FucT-V, FucT-VI, FucT-VII, and combinations thereof</u>, under appropriate conditions to transfer fucose from the fucose donor moiety to a fucose acceptor moiety on said recombinant glycopeptide, thereby producing a fucosylated recombinant glycopeptide, wherein said fucosyltransferase lacks a membrane anchoring domain; and

(b) terminating the transfer of the fucose to the fucose acceptor when the fucosylation pattern substantially identical to the known fucosylation pattern is obtained.

Claim 32. (Original) The method according to claim **31**, further comprising:

(c) assaying the fucosylation pattern of the fucosylated recombinant glycopeptide, thereby determining whether the fucosylation pattern is substantially identical to the known fucosylation pattern.

Claim 33. (Original) The method according to claim **31**, wherein the terminating is due to exhausting in the reaction mixture a member selected from the group consisting of the fucosyltransferase, the fucose donor moiety, the fucose acceptor quench with a chelator and combinations thereof.

Claim 34. (Original) The method according to claim **31**, wherein the glycopeptide comprises a second acceptor moiety for a second fucosyltransferase, and the method further comprises contacting the glycopeptide with a reaction mixture that comprises a fucose donor moiety and the second fucosyltransferase under appropriate conditions to transfer fucose from the fucose donor moiety to the second acceptor moiety.

Claim 35. (Original) The method according to claim **34**, wherein the glycopeptide is contacted with the first fucosyltranferase and the second fucosyltransferase simultaneously.

Claim 36. (Original) The method according to claim **34**, wherein the glycopeptide is contacted with the first fucosyltransferase and the second fucosyltransferase sequentially without isolation of product resulting from contacting with the first fucosyltransferase.

Claim 37. (Cancelled)

Claim 38. (Currently amended) The method according to claim **34**, wherein the second fucosyltransferase is a member selected from FucT-IV, FucT-V, FucT-VI, FucT-VII and combinations thereof.

Claim 39. (Original) The method of claim **31**, wherein the fucosyltransferase is bacterial.

Claim 40. (Original) The method of claim **31**, wherein the fucosyltransferase is recombinantly produced.

Claim 41. (Cancelled)

Claim 42. (Original) The method of claim **31**, wherein at least about 80% of the acceptor moieties on the glycopeptide are fucosylated.

Claim 43. (Original) The method of claim **31**, wherein glycopeptide is reversibly immobilized on a solid support.

Claim 44. (Original) The method of claim **31**, wherein the solid support is an affinity chromatography medium.

Claim 45. (Original) The method of claim **31**, wherein the glycopeptide is a full-length glycopeptide.

Claim 46. (Original) The method of claim **31**, wherein the glycopeptide is a fragment of a full length glycopeptide comprising an active site of the full-length glycopeptide.

Claim 47. (Original) The method according claim **31**, wherein the glycopeptide is an IgG chimera.

Claim 48. (Original) The method of claim **31**, wherein the glycopeptide is a hormone, a growth factor, an enzyme, an enzyme inhibitor, a cytokine, a receptor, a ligand, or a monoclonal antibody.

Claim 49. (Original) The method of claim **31** wherein the glycopeptide is on a cell.

Claim 50. (Original) The method of claim **31**, wherein the acceptor moiety comprises Galβ1-OR, Galβ1,3/4GlcNAc-OR, NeuAcα2,3Galβ1,3/4GlcNAc-OR, wherein R is an amino

acid, a saccharide, an oligosaccharide or an aglycon group having at least one carbon atom and is linked to or is part of a glycopeptide.

Claim 51. (Original) The method of claim **31**, wherein the fucose donor moiety is GDP-fucose.

Claim 52. (Original) The method of claim **31**, further comprising, prior to step (a), contacting said glycopeptide with a glycosyltransferase other than a fucosyltransferase and a donor moiety other than a fucose donor moiety, thereby glycosylating the glycopeptide with a glycosyl moiety other than a fucose unit.

Claim 53. (Original) The method of claim **52**, wherein the glycosyltransferase is a member selected from the group consisting of galactosyltransferase, sialyltransferase and combinations thereof.

Claim 54. (Original) A large-scale method for modifying the glycosylation pattern of a glycopeptide comprising an acceptor moiety for a first fucosyltransferase, said method comprising:

contacting at least about 500 mg of glycopeptide with a reaction mixture that comprises a fucose donor moiety and the first fucosyltransferase under appropriate conditions to transfer fucose from the fucose donor moiety to the acceptor moiety, such that the glycopeptide has a substantially uniform fucosylation pattern.

Claim 55. (Original) A large-scale method of producing a recombinant glycopeptide having a fucosylation pattern that is substantially identical to a fucosylated glycopeptide having a known fucosylation pattern, said method comprising:

(a) contacting at least about 500 mg of the recombinant glycopeptide with a reaction mixture that comprises a fucose donor moiety and the fucosyltransferase under appropriate conditions to transfer fucose from the

fucose donor moiety to a fucose acceptor moiety on said recombinant glycopeptide, thereby producing a fucosylated recombinant glycopeptide; and

(b) terminating the transfer of the fucose to the fucose acceptor when the fucosylation pattern substantially identical to the known fucosylation pattern is obtained.

Claim 56. (Cancelled)

Claim 57. (Cancelled)

Claim 58. (Cancelled)

Claim 59. (Cancelled)

Claim 60. (Cancelled)

Claim 61. (Cancelled)

Claim 62. (Cancelled)

Claim 63. (Cancelled)

Claim 64. (Cancelled)

Claim 65. (Previously presented) A method for modifying the glycosylation pattern of a glycopeptide comprising an acceptor moiety for a first fucosyltransferase, said method comprising:

(a) contacting said glycopeptide with a glycosyltransferase other than a fucosyltransferase and a donor moiety other than a fucose donor moiety, thereby glycosylating the glycopeptide with a glycosyl moiety other than a fucose unit, wherein the glycosyltransferase is a member selected from the group consisting of galactosyltransferase, sialyltransferase and combinations thereof, and

(b) contacting the glycopeptide with a reaction mixture that comprises a fucose donor moiety and the first fucosyltransferase under appropriate conditions to transfer fucose from the fucose donor moiety to the acceptor moiety, such that the glycopeptide has a substantially uniform fucosylation pattern.

Claim 66. (New) A method for modifying the glycosylation pattern of a glycopeptide comprising an acceptor moiety for a first fucosyltransferase, wherein said first fucosyltransferase lacks a membrane anchoring domain, said method comprising:

(a) contacting the glycopeptide with a reaction mixture that comprises a fucose donor moiety and the first fucosyltransferase under appropriate conditions to transfer fucose from the fucose donor moiety to the acceptor moiety, such that the glycopeptide has a substantially uniform fucosylation pattern;

wherein the glycopeptide comprises a second acceptor moiety for a second fucosyltransferase, and

(b) contacting the glycopeptide with a reaction mixture that comprises a fucose donor moiety and the second fucosyltransferase under appropriate conditions to transfer fucose from the fucose donor moiety to the acceptor moiety, such that the glycopeptide has a substantially uniform fucosylation pattern.

Claim 67. (New) A method for modifying the glycosylation pattern of a glycopeptide comprising an acceptor moiety for a first fucosyltransferase, wherein said first fucosyltransferase lacks a membrane anchoring domain, said method comprising:

(a) contacting the glycopeptide with a reaction mixture that comprises a fucose donor moiety and the first fucosyltransferase under appropriate conditions to transfer fucose from the fucose donor moiety to the acceptor moiety, such that the glycopeptide has a substantially uniform fucosylation pattern;

wherein the glycopeptide comprises a second acceptor moiety for a second fucosyltransferase; and

(b) contacting the glycopeptide with a reaction mixture that comprises a fucose donor moiety and the second fucosyltransferase under appropriate conditions to transfer fucose from the fucose donor moiety to the acceptor moiety, such that the glycopeptide has a substantially uniform fucosylation pattern;

wherein the glycopeptide is contacted with the first fucosyltransferase and the second fucosyltransferase simultaneously.

Claim 68. (New) A method for modifying the glycosylation pattern of a glycopeptide comprising an acceptor moiety for a first fucosyltransferase, wherein said first fucosyltransferase lacks a membrane anchoring domain, said method comprising:

(a) contacting the glycopeptide with a reaction mixture that comprises a fucose donor moiety and the first fucosyltransferase under appropriate conditions to transfer fucose from the fucose donor moiety to the acceptor moiety, such that the glycopeptide has a substantially uniform fucosylation pattern;

wherein the glycopeptide comprises a second acceptor moiety for a second fucosyltransferase, and

(b) contacting the glycopeptide with a reaction mixture that comprises a fucose donor moiety and the second fucosyltransferase under appropriate conditions to transfer fucose from the fucose donor moiety to the acceptor moiety, such that the glycopeptide has a substantially uniform fucosylation pattern; and

wherein the second fucosyltransferase is a member selected from FucT-IV, FucT-V, FucT-VI, FucT-VII and combinations thereof.

Claim 69. (New) A method for modifying the glycosylation pattern of a glycopeptide comprising an acceptor moiety for a first fucosyltransferase, wherein said first fucosyltransferase lacks a membrane anchoring domain, said method comprising:

(a) contacting the glycopeptide with a reaction mixture that comprises a fucose donor moiety and the first fucosyltransferase under appropriate conditions to transfer

fucose from the fucose donor moiety to the acceptor moiety, such that the glycopeptide has a substantially uniform fucosylation pattern;

and wherein the fucosyltransferase is bacterial.

Claim 70. (New) A method for modifying the glycosylation pattern of a glycopeptide comprising an acceptor moiety for a first fucosyltransferase, wherein said first fucosyltransferase lacks a membrane anchoring domain, said method comprising:

(a) contacting the glycopeptide with a reaction mixture that comprises a fucose donor moiety and the first fucosyltransferase under appropriate conditions to transfer fucose from the fucose donor moiety to the acceptor moiety, such that the glycopeptide has a substantially uniform fucosylation pattern;

wherein the glycopeptide is a fragment of a full length glycopeptide comprising an active site of the full-length glycopeptide.

Claim 71. (New) A method for modifying the glycosylation pattern of a glycopeptide comprising an acceptor moiety for a first fucosyltransferase, wherein said first fucosyltransferase lacks a membrane anchoring domain, said method comprising:

(a) contacting the glycopeptide with a reaction mixture that comprises a fucose donor moiety and the first fucosyltransferase under appropriate conditions to transfer fucose from the fucose donor moiety to the acceptor moiety, such that the glycopeptide has a substantially uniform fucosylation pattern;

wherein the glycopeptide is an IgG chimera.

Claim 72. (New) A method for modifying the glycosylation pattern of a glycopeptide comprising an acceptor moiety for a first fucosyltransferase, wherein said first fucosyltransferase lacks a membrane anchoring domain, said method comprising:

(a) contacting the glycopeptide with a reaction mixture that comprises a fucose donor moiety and the first fucosyltransferase under appropriate conditions to transfer

fucose from the fucose donor moiety to the acceptor moiety, such that the glycopeptide has a substantially uniform fucosylation pattern;

wherein the glycopeptide is a hormone, a growth factor, an enzyme, an enzyme inhibitor, a cytokine, and a receptor.

Claim 73. (New) A method for modifying the glycosylation pattern of a glycopeptide comprising an acceptor moiety for a first fucosyltransferase, wherein said first fucosyltransferase lacks a membrane anchoring domain, said method comprising:

(a) contacting the glycopeptide with a reaction mixture that comprises a fucose donor moiety and the first fucosyltransferase under appropriate conditions to transfer fucose from the fucose donor moiety to the acceptor moiety, such that the glycopeptide has a substantially uniform fucosylation pattern;

wherein the glycopeptide is on a cell.

Claim 74. (New) A method for modifying the glycosylation pattern of a glycopeptide comprising an acceptor moiety for a first fucosyltransferase, wherein said first fucosyltransferase lacks a membrane anchoring domain, said method comprising:

contacting said glycopeptide with a glycosyltransferase selected from the group consisting of galactosyltransferase, sialyltransferase and combinations thereof, and a donor moiety other than a fucose donor moiety, thereby glycosylating the glycopeptide with a glycosyl moiety other than a fucose unit; and

(a) contacting the glycopeptide with a reaction mixture that comprises a fucose donor moiety and the first fucosyltransferase under appropriate conditions to transfer fucose from the fucose donor moiety to the acceptor moiety, such that the glycopeptide has a substantially uniform fucosylation pattern.

Claim 75. (New) A method of producing a recombinant glycopeptide having a fucosylation pattern that is substantially identical to a fucosylated glycopeptide having a known fucosylation pattern, said method comprising:

(a) contacting the recombinant glycopeptide with a reaction mixture that comprises a fucose donor moiety and the fucosyltransferase is selected from FucT-IV, FucT-V, FucT-VI, FucT-VII, and combinations thereof, under appropriate conditions to transfer fucose from the fucose donor moiety to a fucose acceptor moiety on said recombinant glycopeptide, thereby producing a fucosylated recombinant glycopeptide, wherein said fucosyltransferase lacks a membrane anchoring domain; and

wherein the glycopeptide comprises a second acceptor moiety for a second fucosyltransferase;

(b) contacting the glycopeptide with a reaction mixture that comprises a fucose donor moiety and the second fucosyltransferase under appropriate conditions to transfer fucose from the fusoce donor moiety to the second acceptor moiety; and

(c) terminating the transfer of the fucose to the fucose acceptor when the fucosylation pattern substantially identical to the known fucosylation pattern is obtained.

Claim 76. (New) A method of producing a recombinant glycopeptide having a fucosylation pattern that is substantially identical to a fucosylated glycopeptide having a known fucosylation pattern, said method comprising:

(a) contacting the recombinant glycopeptide with a reaction mixture that comprises a fucose donor moiety and the fucosyltransferase is selected from FucT-IV, FucT-V, FucT-VI, FucT-VII, and combinations thereof, under appropriate conditions to transfer fucose from the fucose donor moiety to a fucose acceptor moiety on said recombinant glycopeptide, thereby producing a fucosylated recombinant glycopeptide, wherein said fucosyltransferase lacks a membrane anchoring domain; and

wherein the glycopeptide comprises a second acceptor moiety for a second fucosyltransferase;

(b) contacting the glycopeptide with a reaction mixture that comprises a fucose donor moiety and the second fucosyltransferase under appropriate conditions to transfer

fucose from the fucose donor moiety to the acceptor moiety, such that the glycopeptide has a substantially uniform fucosylation pattern;

wherein the glycopeptide is contacted with the first fucosyltransferase and the second fucosyltransferase simultaneously; and

(c) terminating the transfer of the fucose to the fucose acceptor when the fucosylation pattern substantially identical to the known fucosylation pattern is obtained.

Claim 77. (New) A method of producing a recombinant glycopeptide having a fucosylation pattern that is substantially identical to a fucosylated glycopeptide having a known fucosylation pattern, said method comprising:

(a) contacting the recombinant glycopeptide with a reaction mixture that comprises a fucose donor moiety and the fucosyltransferase is selected from FucT-IV, FucT-V, FucT-VI, FucT-VII, and combinations thereof, under appropriate conditions to transfer fucose from the fucose donor moiety to a fucose acceptor moiety on said recombinant glycopeptide, thereby producing a fucosylated recombinant glycopeptide, wherein said fucosyltransferase lacks a membrane anchoring domain; and

wherein the glycopeptide comprises a second acceptor moiety for a second fucosyltransferase;

(b) contacting the glycopeptide with a reaction mixture that comprises a fucose donor moiety and the second fucosyltransferase under appropriate conditions to transfer fucose from the fucose donor moiety to the acceptor moiety, such that the glycopeptide has a substantially uniform fucosylation pattern; and

wherein the second fucosyltransferase is a member selected from FucT-IV, FucT-V, FucT-VI, FucT-VII, and combinations thereof; and

(c) terminating the transfer of the fucose to the fucose acceptor when the fucosylation pattern substantially identical to the known fucosylation pattern is obtained.

Claim 78. (New) A method of producing a recombinant glycopeptide having a fucosylation pattern that is substantially identical to a fucosylated glycopeptide having a known fucosylation pattern, said method comprising:

(a) contacting the recombinant glycopeptide with a reaction mixture that comprises a fucose donor moiety and the fucosyltransferase is selected from FucT-IV, FucT-V, FucT-VI, FucT-VII, and combinations thereof, under appropriate conditions to transfer fucose from the fucose donor moiety to a fucose acceptor moiety on said recombinant glycopeptide, thereby producing a fucosylated recombinant glycopeptide, wherein said fucosyltransferase lacks a membrane anchoring domain; and

wherein the fucosyltransferase is bacterial; and

(b) terminating the transfer of the fucose to the fucose acceptor when the fucosylation pattern substantially identical to the known fucosylation pattern is obtained.

Claim 79. (New) A method of producing a recombinant glycopeptide having a fucosylation pattern that is substantially identical to a fucosylated glycopeptide having a known fucosylation pattern, said method comprising:

(a) contacting the recombinant glycopeptide with a reaction mixture that comprises a fucose donor moiety and the fucosyltransferase is selected from FucT-IV, FucT-V, FucT-VI, FucT-VII, and combinations thereof, under appropriate conditions to transfer fucose from the fucose donor moiety to a fucose acceptor moiety on said recombinant glycopeptide, thereby producing a fucosylated recombinant glycopeptide, wherein said fucosyltransferase lacks a membrane anchoring domain; and

wherein the glycopeptide is a fragment of a full length glycopeptide comprising an active site of the full-length glycopeptide; and

(b) terminating the transfer of the fucose to the fucose acceptor when the fucosylation pattern substantially identical to the known fucosylation pattern is obtained.

Claim 80. (New) A method of producing a recombinant glycopeptide having a fucosylation pattern that is substantially identical to a fucosylated glycopeptide having a known fucosylation pattern, said method comprising:

(a) contacting the recombinant glycopeptide with a reaction mixture that comprises a fucose donor moiety and the fucosyltransferase is selected from FucT-IV, FucT-V, FucT-VI, FucT-VII, and combinations thereof, under appropriate conditions to transfer fucose from the fucose donor moiety to a fucose acceptor moiety on said recombinant glycopeptide, thereby producing a fucosylated recombinant glycopeptide, wherein said fucosyltransferase lacks a membrane anchoring domain; and

wherein the glycopeptide is an IgG chimera; and

(b) terminating the transfer of the fucose to the fucose acceptor when the fucosylation pattern substantially identical to the known fucosylation pattern is obtained.

Claim 81. (New) A method of producing a recombinant glycopeptide having a fucosylation pattern that is substantially identical to a fucosylated glycopeptide having a known fucosylation pattern, said method comprising:

(a) contacting the recombinant glycopeptide with a reaction mixture that comprises a fucose donor moiety and the fucosyltransferase is selected from FucT-IV, FucT-V, FucT-VI, FucT-VII, and combinations thereof, under appropriate conditions to transfer fucose from the fucose donor moiety to a fucose acceptor moiety on said recombinant glycopeptide, thereby producing a fucosylated recombinant glycopeptide, wherein said fucosyltransferase lacks a membrane anchoring domain; and

wherein the glycopeptide is a hormone, a growth factor, an enzyme, an enzyme inhibitor, a cytokine, and a receptor; and

(b) terminating the transfer of the fucose to the fucose acceptor when the fucosylation pattern substantially identical to the known fucosylation pattern is obtained.

Claim 82. (New) A method of producing a recombinant glycopeptide having a fucosylation pattern that is substantially identical to a fucosylated glycopeptide having a known fucosylation pattern, said method comprising:

(a) contacting said glycopeptide with a glycosyltransferase other than a fucosyltransferase and a donor moiety other than a fucose donor moiety, thereby glycosylating the glycopeptide with a glycosyl moiety other than a fucose unit, wherein the glycosyltransferase is a member selected from the group consisting of galactosyltransferase, sialyltransferase and combinations thereof

(b) contacting the recombinant glycopeptide with a reaction mixture that comprises a fucose donor moiety and the fucosyltransferase is selected from FucT-IV, FucT-V, FucT-VI, FucT-VII, and combinations thereof, under appropriate conditions to transfer fucose from the fucose donor moiety to a fucose acceptor moiety on said recombinant glycopeptide, thereby producing a fucosylated recombinant glycopeptide, wherein said fucosyltransferase lacks a membrane anchoring domain; and

(c) terminating the transfer of the fucose to the fucose acceptor when the fucosylation pattern substantially identical to the known fucosylation pattern is obtained.